

and two 5-mm ports are introduced to allow safe dissection and removal of the gallbladder.

Advanced therapeutic procedures require pediatric surgeons to have additional experience and training. These procedures have included Nissen fundoplication, appendectomy, splenectomy, resection of pelvic or ovarian malignant tumors, the management of high undescended testicles, and many other diagnostic procedures.

The indications for doing these procedures would include all of the factors usually considered for recommending an open procedure. Complicating factors that would contraindicate using a video-assisted technique include extensive previous surgical procedures, severe hepatomegaly or splenomegaly, or portal hypertension. The video-assisted technique may be particularly suitable for patients with compromised pulmonary function or impaired wound healing (chemotherapy, malnutrition), but these patients should still meet the standard indications for surgery that have been used to select patients for open procedures.

The complications would also be similar to those for open procedures. Unique considerations in laparoscopy would include unintentional injury to viscera from cautery and tension pneumothorax. Electrocautery in a closed abdomen may result in the transmission of energy from the intended site and requires particular care on the part of the surgeon.

At present only a small percentage of video-assisted procedures are being done in children. In the past year the types of procedures considered and the number of surgeons involved have expanded rapidly. With increasing use, we can expect these techniques to be further refined.

JAMES B. ATKINSON, MD
Los Angeles, California

REFERENCES

- Lobe TE, Schrop KP, Lunsford K: Laparoscopic Nissen fundoplication in childhood. *J Pediatr Surg* 1993; 28:358-360
Zucker KA: Perceived future of laparoscopic general surgery. *Can J Surg* 1992; 35:297-304

Advances in the Screening and Staging of Colon and Rectal Cancers

OUR UNDERSTANDING OF the management of colon and rectal cancers has evolved dramatically in the past five years. There is an increased understanding of the natural history of these diseases as reflected in our staging and screening technologies.

The traditional Dukes' staging system is inadequate to evaluate colon and rectal cancers, and the use of tumor-node-metastasis staging has gained wide acceptance at most cancer centers. Tumor-node-metastasis staging is used because the depth of tumor penetration, the extent of lymph node involvement, and the presence of distant metastases best characterize patients' prognosis. In addition, this system is useful in more precisely comparing various surgical experiences and reports. Preoperative staging is being used only when findings would influence therapeutic alternatives. As a result, modalities that are now recognized as being helpful in preoperative staging—transrectal ultrasonography, flow cytometry, and computed tomography—are used sparingly.

Colon cancer is moving to the right. This is a result of not only an increase in the incidence of right-sided colon cancer, but also a decrease in the incidence of left-sided colon cancer. The same disease cannot be increasing and decreasing in incidence at the same time; therefore, it is now clear that right-sided colon cancer is a different disease from left-sided colon cancer. These diseases are different in their morphologic presentation, incidence, prognosis, and biologic markers. In evaluating various therapeutic options, the differences in these tumors must be recognized.

Controversy remains about the value of screening for colon and rectal cancers. Recent publications, however, strongly suggest that screening for occult blood in the stool is cost-effective and indeed prolongs the survival of patients in whom colon and rectal cancers subsequently develop. Prolonged follow-up has been necessary to show this advantage.

ROBERT W. BEART, MD
Los Angeles, California

REFERENCES

- Ahlquist DA, Wieand HS, Moertel CG, et al: Accuracy of fecal occult blood screening for colorectal neoplasia—A prospective study using Hemoccult and HemoQuant tests. *JAMA* 1993; 269:1262-1267
Mandel JS, Bond JH, Church TR, et al: Reducing mortality from colorectal cancer by screening for fecal occult blood—Minnesota Colon Cancer Control Study. *N Engl J Med* 1993; 328:1365-1371
Stahl TJ, Murray JJ, Collier JA, Schoetz DJ Jr, Roberts PL, Veidenheimer MC: Sphincter-saving alternatives in the management of adenocarcinoma involving the distal rectum—Five-year follow-up results in 40 patients. *Arch Surg* 1993; 128:545-549
Thibodeau SN, Bren G, Schaid D: Microsatellite instability in cancer of the proximal colon. *Science* 1993; 260:816-819
Williams ST, Beart RW Jr: Staging of colorectal cancer. *Semin Surg Oncol* 1992; 8:89-93

Progress in Preventing Amputation in Leg Ischemia

PERIPHERAL VASCULAR SURGERY is succeeding in preventing stroke through carotid endarterectomy, extending the length of comfortable life through aortic aneurysm resection, and is becoming increasingly successful in preventing lower extremity amputation. For example, one group rejected only 11 of 564 limbs (1.9%) requiring distal revascularization. These were limbs with advanced ischemia or contractures considered nonsalvageable. This was a category that ten years ago ranged from 5% to 15% of patients with critical limb ischemia.

Increasing experience in harvesting autogenous veins has made it possible to find and use this tissue in more than 90% of cases. This remains the conduit of choice in revascularizing patients with gangrene. Thus, it has proved important to search for a suitable venous bypass in those patients (as many as 30%) from whom the long saphenous vein has been removed.

Experience teaches that using an autogenous vein for distal bypass, whether reversed or in situ, achieves long-term patency in 80% of limbs and that the percentage of amputations prevented exceeds 90%.

Even when prosthetic bypasses must be used, knitted Dacron and expanded polytetrafluoroethylene now achieve five-year patency rates of 30% to 50%. Limb salvage rates